

WHAT IS CLAIMED IS:

1. A system, comprising:

5 a processor; and

memory coupled to the processor and configured to store program instructions executable by the processor to implement a class structure based data object enhancer configured to:

10 input one or more classes;

analyze the structure of the one or more classes to determine a persistence structure for data of the one or more classes to be persisted; and

15 generate one or more enhanced classes corresponding to the one or more classes such that the one or more classes are enhanced to persist the persistent class data according to the persistence structure.

20 2. The system as recited in claim 1, wherein to analyze the structure of the classes, the class structure based enhancer is configured to make one or more Java reflection calls to the input classes.

25 3. The system as recited in claim 1, wherein to analyze the structure of the classes, the class structure based enhancer is configured to parse bytecode of the one or more classes to determine class and field attributes.

30 4. The system as recited in claim 1, wherein the class structure based enhancer is further configured to generate metadata that includes the results of the class analysis.

5. The system as recited in claim 4, wherein the generated metadata is output explicitly as a metadata file.

5 6. The system as recited in claim 5, wherein the metadata file is an extensible markup language (XML) file.

7. The system as recited in claim 1, wherein the persistence structure corresponds to the structure of the one or more classes.

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8. The system as recited in claim 1, wherein the persistence structure maps the data to be persisted to a single table in a database.

9. The system as recited in claim 1, wherein to determine a persistence
15 structure for the data of the one or more classes the class structure based enhancer is configured to apply one or more rules to the results of Java reflection calls to or byte code parsing of the one or more input classes.

10. The system as recited in claim 9, wherein the rules applied by the class
20 structure based enhancer include persisting class fields that are not static or transient.

11. The system as recited in claim 9, wherein the rules applied by the class structure based enhancer include storing persistent fields of a given class in a table corresponding to that class in a database.

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12. The system as recited in claim 1, wherein the one or more classes are comprised in a Java ARchive (JAR) file.

13. The system as recited in claim 1, wherein the class structure based JDO enhancer is further configured to output the enhanced one or more classes and a database schema for storing the persistent class data in a persistent data store.

5 14. A method, comprising:

receiving one or more classes;

analyzing the structure of the one or more classes to determine a persistence
10 structure for data of the one or more classes to be persisted; and

generating one or more enhanced classes corresponding to the one or more classes
such that the one or more classes are enhanced to persist the persistent
class data according to the persistence structure.

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15. The method as recited in claim 14, wherein said analyzing comprises the class structure based enhancer making one or more Java reflection calls to the input classes.

20 16. The method as recited in claim 14, wherein said analyzing comprises the class structure based enhancer parsing bytecode of the one or more classes to determine class and field attributes.

25 17. The method as recited in claim 14, wherein the class structure based enhancer is further configured to generate metadata that includes the results of the class analysis.

18. The method as recited in claim 17, wherein the metadata is output explicitly as a metadata file.

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19. The method as recited in claim 18, wherein the metadata file is an XML file.

20. The method as recited in claim 14, wherein the persistence structure
5 corresponds to the structure of the one or more classes.

21. The method as recited in claim 14, wherein the persistence structure maps the data to be persisted to a single table in a database.

10 22. The method as recited in claim 14, wherein said determining of the persistence structure for the data of the one or more classes comprises the class structure based enhancer applying one or more rules to the results of Java reflection calls to or byte code parsing of the one or more input classes.

15 23. The method as recited in claim 22, wherein the rules applied by the class structure based enhancer include persisting class fields that are not static or transient.

24. The method as recited in claim 22, wherein the rules applied by the class structure based enhancer include storing persistent fields of a given class in a table
20 corresponding to that class in a database.

25. The method as recited in claim 14, wherein the one or more classes are comprised in a Java ARchive (JAR) file.

25 26. The method as recited in claim 14, further comprising the class structure based JDO enhancer outputting the enhanced one or more classes and a database schema for storing the persistent class data in a persistent data store.

27. A computer-accessible medium comprising program instructions, wherein
30 the program instructions are computer-executable to:

input one or more classes;

analyze the structure of the one or more classes to determine a persistence
5 structure for data of the one or more classes to be persisted; and

generate one or more enhanced classes corresponding to the one or more classes
such that the one or more classes are enhanced to persist the persistent
class data according to the persistence structure.

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28. The computer-accessible medium as recited in claim 27, wherein to
analyze the structure of the classes, the class structure based enhancer is configured to
make one or more Java reflection calls to the input classes.

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29. The computer-accessible medium as recited in claim 27, wherein to
analyze the structure of the classes, the class structure based enhancer is configured to
parse bytecode of the one or more classes to determine class and field attributes.

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30. The computer-accessible medium as recited in claim 27, wherein the class
structure based enhancer is further configured to generate metadata that includes the
results of the class analysis.

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31. The computer-accessible medium as recited in claim 30, wherein the
generated metadata is output explicitly as a metadata file.

32. The computer-accessible medium as recited in claim 31, wherein the
metadata file is an extensible markup language (XML) file.

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33. The computer-accessible medium as recited in claim 27, wherein the
persistence structure corresponds to the structure of the one or more classes.

34. The computer-accessible medium as recited in claim 27, wherein the persistence structure maps the data to be persisted to a single table in a database.

5 35. The computer-accessible medium as recited in claim 27, wherein to determine a persistence structure for the data of the one or more classes the class structure based enhancer is configured to apply one or more rules to the results of Java reflection calls to or byte code parsing of the one or more input classes.

10 36. The computer-accessible medium as recited in claim 35, wherein the rules applied by the class structure based enhancer include persisting class fields that are not static or transient.

15 37. The computer-accessible medium as recited in claim 35, wherein the rules applied by the class structure based enhancer include storing persistent fields of a given class in a table corresponding to that class in a database.

20 38. The computer-accessible medium as recited in claim 27, wherein the one or more classes are comprised in a Java ARchive (JAR) file.

25 39. The computer-accessible medium as recited in claim 27, wherein the class structure based JDO enhancer is further configured to output the enhanced one or more classes and a database schema for storing the persistent class data in a persistent data store.